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PENSOFT

First documented record of *Chordeiles pusillus* (Gould, 1861) (Caprimulgiformes, Caprimulgidae) in São Paulo state

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Abstract
This note presents the first documented record of Least Nighthawk, *Chordeiles pusillus* (Gould, 1861), in São Paulo state, Brazil. The species was observed on four occasions (January 31, April 25, and July 27, 2016; April 27, 2017) in a sandy-rocky habitat on the left bank of Grande river, Mira Estrela municipality. This record is at least 300 km from the previously known occurrences of the species.

Keywords
Cryptic plumage, Grande river, nighthawk, reservoir.

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Introduction

Least Nighthawk, *Chordeiles pusillus* (Gould, 1861), is a bird that exhibits twilight and nocturnal habits and is considered the smallest member of Caprimulgidae in South America (Cleere 2010). *Chordeiles pusillus* has an incredible ability to camouflage itself in its surroundings due to its cryptic colored plumage pattern (Cleere 2010). Throughout its geographic range there are six subspecies (Cleere et al. 2017). The central Brazilian populations are limited to the states of Minas Gerais, Mato Grosso do Sul (Sick 1997; Cleere et al. 2017), and São Paulo state, where there is little information. Willis and Oniki (1993) reported *C. pusillus* from São Paulo state in the 1980s, in the municipalities of Pedregulho, Rifaina, and Altinópolis. Later, they also recorded the species in other two municipalities of that state: Itirapuã and Patrocínio Paulista (Willis and Oniki 2003), but none of these records were documented. Therefore, *C. pusillus* was removed from the bird list of São Paulo state due to the lack of documentation (Silveira and Uezu 2011). Thus, we present the first documented record of *C. pusillus* in São Paulo, confirming its presence in the state.

Methods

The study area encompasses the Atlantic Rainforest domain, with a prevalence of semi-deciduous forest physiognomy (Kronka et al. 2005). *Chordeiles pusillus* was recorded during the bird monitoring of Água Vermelha reservoir in Mira Estrela municipality, northern São Paulo state (19°52′54″S, 050°06′24″W) (Fig. 1). This bird monitoring aimed at evaluating remnants of native vegetation on the reservoir banks. We used a Nikon P520 camera and Bushnell 10 × 42 mm binoculars for sighting. Birds were documented by photographs.

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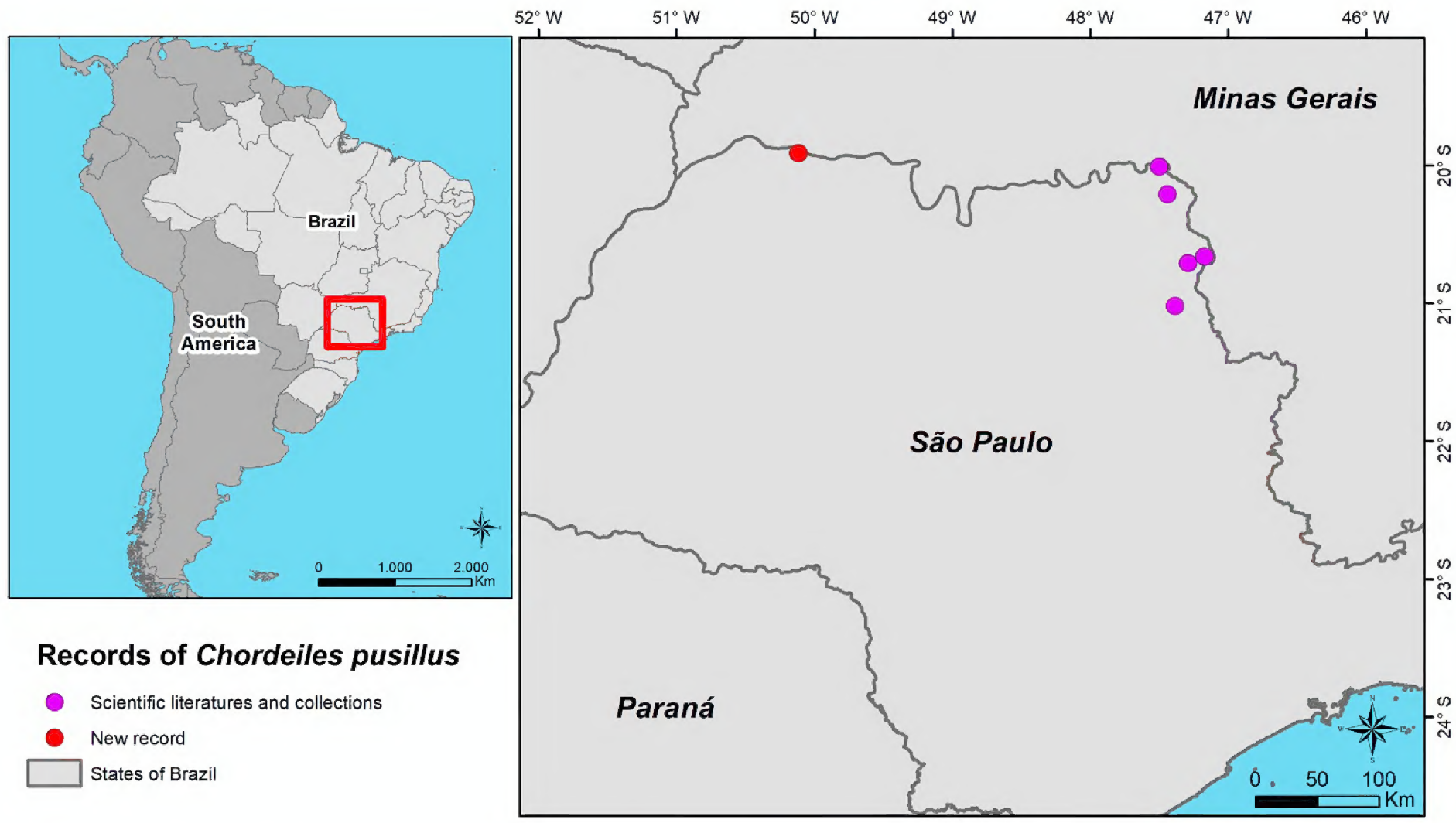

Figure 1. Map showing the historical reports of Least Nighthawk *Chordeiles pusillus* indicated by Willis and Oniki (1993, 2003) for São Paulo state (purple dots) and the actual and first documented (by photo) record of the species in the state (red dot).

Results

New records. Brazil: São Paulo, left bank of Grande river in Água Vermelha reservoir, Mira Estrela municipality (19°52′54″S, 050°06′24″W), TVBR, 31 Jan. 2016 (7:40 a.m.), 25 Apr. 2016 (8:05 a.m.), 27 Jul. 2016 (8:10 a.m.), 27 Apr. 2017 (8:05 a.m.) (one, four, three, and four individuals, respectively). The photographic records have been deposited on the e-bird database site (Macaulay Library, of Cornell Lab of Ornithology) under catalog numbers: ML 175623911 and ML 175623941 (Fig. 2). The birds were only sighted and did not vocalize.

Habitat. Sandy-rocky banks of Grande river (about 20 m width), approximately 10 m from the edge of a fragment of secondary semideciduous forest (Fig. 3).

Identification. *Chordeiles pusillus* differs from other species in the genus in having the remiges with white borders (a clear fieldmark in flight) and the brownish pattern of the wing-covers contrasting with its general pale plumage (Cleere et al. 2017; Fig. 2). It also differs from other caprimulgid species in open areas by its size and silhouette, e.g. *Hydropsalis parvula* (Gould 1837), *H. longirostris* (Bonaparte 1825), and *Podager nacunda* (Vieillot 1817). In addition, *C. pusillus* rests on the ground throughout the day, which is an unusual behavior in other species of *Chordeiles* in the Atlantic domain, *C. acutipennis* (Hermann 1783) and *C. minor* Vigors, 1825; these species are observed more frequently in trees (Cleere 2010; Cleere et al. 2017).

Discussion

Despite of the possible migratory movements known for *Chordeiles pusillus* (Sick 1997), our records, which were made in three distinct times of the year, suggest

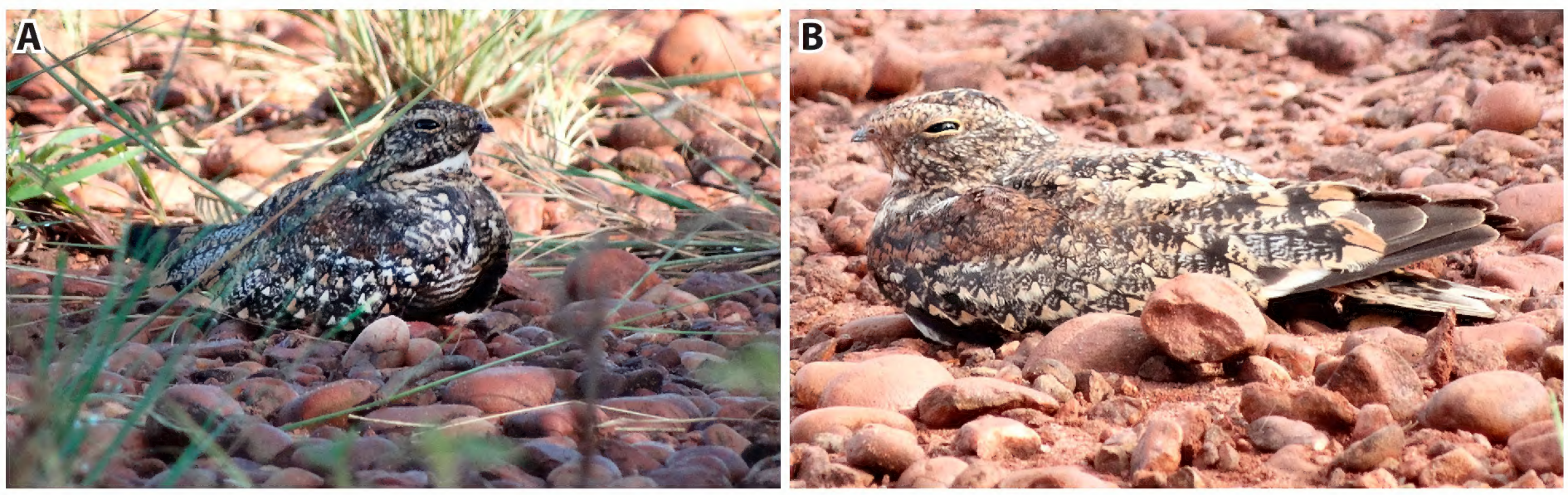

Figure 2. *Chordeiles pusillus* in Mira Estrela, SP, showing contrast of wing-covers brownish. Note the white band around the edge of four primaries (**B**) (ML 175623911, 175623941). (Photos: Thalles V. B. Ribeiro/Casa da Floresta)

Figure 3. Habitat in Mira Estrela, SP, where *Chordeiles pusillus* was observed. (Photo: Raisa Rodarte/Casa da Floresta).

that the observed individuals are probably resident in the area. However, these records were made in an area of the Grande river which is susceptible to annual variations in the water level due to the reservoir; fluctuations in the water level can cause the expansion or reduction of habitat availability for the species.

Our documented new records are important because they confirm the presence of *C. pusillus* in São Paulo state, a state for which the bird diversity is among the best-known in Brazil (Silveira and Uezu 2011). The location of the new records is at least 300 km from the previously documented occurrences, the municipalities of Pedregulho, Rifaina, and Altinópolis (Willis and Oniki 1993, 2003; Fig. 1). In São Paulo there are many ornithologists and birdwatchers, but also many areas where the biodiversity is barely sampled, such as in the northwest of the state. Therefore, we encourage others to search for this species in other areas having similar habitats as recorded here, including the historical locations as noted, but not fully documented, in the literature.

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Authors' Contributions

FIG identified the species, conducted the literature review, and wrote the manuscript. RR participated in the field survey, wrote the description of the area, translated the manuscript and review. TVBR carried out the field surveys, collected the data, and took the photographs. VAG and AM helped write and reviewed the manuscript. All authors read and approved the final manuscript.

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